

Claims

What is claimed is:

1. A wellhead, comprising:
 - an outer casing at least partially positioned within a wellbore; and
 - a plurality of inner casings coupled to the interior surface of the outer casing by the process of expanding each of the inner casings into contact with at least a portion of the interior surface of the outer casing; and
 - wherein adjacent inner casings define an annulus therebetween.

2. A method of forming a wellhead, comprising:
 - drilling a wellbore;
 - positioning an outer casing at least partially within an upper portion of the wellbore;
 - positioning a first tubular member within the outer casing;
 - expanding at least a portion of the first tubular member into contact with an interior surface of the outer casing;
 - positioning a second tubular member within the outer casing and the first tubular member; and
 - expanding at least a portion of the second tubular member into contact with an interior portion of the outer casing;
 - wherein the first and second tubular members define an annulus therebetween.

3. An apparatus, comprising:
 - an outer tubular member; and
 - a plurality of inner tubular members coupled to the interior surface of the outer tubular member by the process of expanding one or more of the inner tubular members into contact with at least a portion of the interior surface of the outer tubular member;
 - wherein adjacent inner tubular members define an annulus therebetween.

4. The wellhead of claim 1, wherein the inner casings are expanded by extruding the inner casings off of a mandrel.
5. The wellhead of claim 1, wherein the inner casings are expanded by the process of:

placing the inner casing and a mandrel within the wellbore; and
pressurizing an interior portion of the inner casing.
6. The wellhead of claim 5, wherein during the pressurizing, the interior portion of the inner casing is fluidically isolated from an exterior portion of the inner casing.
7. The wellhead of claim 5, wherein the interior portion of the inner casing is pressurized at pressures ranging from about 500 to 9,000 psi.
8. The wellhead of claim 1, further comprising one or more seals positioned in the interface between the inner casings and the outer casing.
9. The wellhead of claim 1, wherein the inner casings are supported by their contact with the outer casing.
10. The method of claim 2, further including pressurizing at least a portion of the interior of the first tubular member.
11. The method of claim 2, further including pressurizing at least a portion of the interior of the second tubular member.
12. The method of claim 2, further including pressurizing at least a portion of the interiors of the first and second tubular members.

13. The method of claim 10, wherein the pressurizing of the portion of the interior region of the first tubular member is provided at operating pressures ranging from about 500 to 9,000 psi.

14. The method of claim 11, wherein the pressurizing of the portion of the interior region of the second tubular member is provided at operating pressures ranging from about 500 to 9,000 psi.

15. The method of claim 12, wherein the pressurizing of the portion of the interior region of the first and second tubular members is provided at operating pressures ranging from about 500 to 9,000 psi.

16. The method of claim 10, wherein the pressurizing of the portion of the interior region of the first tubular member is provided at reduced operating pressures during a latter portion of the expansion.

17. The method of claim 11, wherein the pressurizing of the portion of the interior region of the second tubular member is provided at reduced operating pressures during a latter portion of the expansion.

18. The method of claim 12, wherein the pressurizing of the portion of the interior region of the first and second tubular members is provided at reduced operating pressures during a latter portion of the expansions.

19. The method of claim 2, further comprising:
sealing the contact between the first tubular member and the outer casing.

20. The method of claim 2, further comprising:
sealing the contact between the second tubular member and the outer casing.

21. The method of claim 2, further comprising:
sealing the contact between the first and second tubular members and the
outer casing.
22. The method of claim 2, further comprising:
supporting the expanded first tubular member using the contact with the
outer casing.
23. The method of claim 2, further comprising:
supporting the expanded second tubular member using the contact with
the outer casing.
24. The method of claim 2, further comprising:
supporting the expanded first and second tubular members using their
contacts with the outer casing.
25. The method of claim 2, further including extruding the first and second tubular
members off of a mandrel.
26. The method of claim 25, further comprising:
lubricating the surface of the mandrel.
27. The method of claim 2, further comprising:
absorbing shock.
28. The method of claim 25, further comprising:
expanding the mandrel in a radial direction.
29. The method of claim 2, further comprising:
positioning the first and second tubular members in an overlapping
relationship.

30. The method of claim 2, further comprising:
fluidically isolating an interior region of the first tubular member from an exterior region of the first tubular member.
31. The method of claim 2, further comprising:
fluidically isolating an interior region of the second tubular member from an exterior region of the second tubular member.
32. The method of claim 30, wherein the interior region of the first tubular member is fluidically isolated from the region exterior to the first tubular member by injecting one or more plugs into the interior of the first tubular member.
33. The method of claim 31, wherein the interior region of the second tubular member is fluidically isolated from the region exterior to the second tubular member by injecting one or more plugs into the interior of the second tubular member.
34. The method of claim 10, wherein the pressurizing of the portion of the interior region of the first tubular member is provided by injecting a fluidic material at operating pressures and flow rates ranging from about 500 to 9,000 psi and 40 to 3,000 gallons/minute.
35. The method of claim 11, wherein the pressurizing of the portion of the interior region of the second tubular member is provided by injecting a fluidic material at operating pressures and flow rates ranging from about 500 to 9,000 psi and 40 to 3,000 gallons/minute.
36. The method of claim 25, further comprising:
injecting fluidic material beyond the mandrel.

37. The method of claim 25, wherein a region of the tubular members beyond the mandrel is pressurized.
38. The method of claim 25, wherein the region of the tubular members beyond the mandrel is pressurized to pressures ranging from about 500 to 9,000 psi.
39. The method of claim 2, wherein the first tubular member comprises a production casing.
40. The method of claim 2, further comprising:
sealing the contact between the first tubular member and the outer casing.
41. The method of claim 2, further comprising:
sealing the contact between the second tubular member and the outer casing.
42. The method of claim 2, further comprising:
supporting the expanded first tubular member using the outer casing.
43. The method of claim 2, further comprising:
supporting the expanded second tubular member using the outer casing.
44. The method of claim 40, further comprising:
testing the integrity of the seal in the contact between the first tubular member and the outer casing.
45. The method of claim 41, further comprising:
testing the integrity of the seal in the contact between the second tubular member and the outer casing.
46. The method of claim 25, further comprising:

catching the mandrel upon the completion of the extruding.

47. The method of claim 25, further comprising:
drilling out the mandrel.
48. The method of claim 25, further comprising:
supporting the mandrel with coiled tubing.
49. The method of claim 25, further comprising:
coupling the mandrel to a drillable shoe.
50. The apparatus of claim 3, wherein the inner tubular members are expanded by extruding the inner tubular members off of a mandrel.
51. The apparatus of claim 50, wherein the inner tubular members are expanded by the process of:
placing the inner tubular members and a mandrel within the outer tubular member; and
pressurizing an interior portion of the inner casing.
52. The apparatus of claim 51, wherein during the pressurizing, the interior portion of the inner tubular member is fluidically isolated from an exterior portion of the inner tubular member.
53. The apparatus of claim 51, wherein the interior portion of the inner tubular member is pressurized at pressures ranging from about 500 to 9,000 psi.
54. The apparatus of claim 3, further comprising one or more seals positioned in the interface between the inner tubular members and the outer tubular member.

55. The wellhead of claim 3, wherein the inner tubular members are supported by their contact with the outer tubular member.
56. The wellhead of claim 1, wherein each inner casing comprises:
a first tubular portion supported by contact pressure between an outer surface of the first tubular portion and the inner surface of the outer casing; and
a second tubular portion extending from and coupled to the first tubular portion that is spaced apart from the outer casing in a radial direction.
57. The wellhead of claim 56, wherein the first tubular portions of the inner casings are spaced apart from one another in a longitudinal direction.
58. The wellhead of claim 56, wherein the second tubular portions of the inner casings are spaced apart from one another in a radial direction.
59. The wellhead of claim 56, wherein the first tubular portions of the inner casings are spaced apart from one another in a longitudinal direction; and wherein the second tubular portions of the inner casings are spaced apart from one another in a radial direction.